

Newsademic.com

The informative easy to read introduction to world news



25th July 2013

British English edition

Issue Number 202

In this issue

Earthquake in China
Royal baby arrives
New museum in Hamburg
Cashmere and endangered species
North Korean ship searched
World Youth Day in Rio
Treaty's 300th anniversary
Drug arrest in Mexico
Neptune's new moon
Tyrannosaurus Rex debate settled?
Silver ingots recovered
Boat people in Australia
Pitch drop finally recorded
Human-powered helicopter wins
Royal Society medals
'Motor City' bankruptcy
Israeli Palestinian peace talks
Ape memory experiments
Anti-shark wetsuits
Glossary Crossword and Wordsearch Puzzle



Cassini picture of Saturn's rings and the Earth (marked with an arrow) 1.4 billion kilometres away (NASA)

'THE DAY THE EARTH SMILED'

On 19th July a camera on the Cassini spacecraft took a picture of Saturn. Its rings were lit up by light from the Sun. For about 15 minutes, while the picture was taken, Saturn shielded Cassini's camera from the Sun's bright glare.

Something else can be seen in the image, a tiny, light blue dot. This is the Earth. In the picture it is 1.4 billion kilometres (870 million miles) away, or roughly ten times the distance from the Earth to the Sun.

Cassini's picture of our planet is only the third to have been taken from the outer Solar System. As the Earth had its picture taken on this day many said 19th July was 'The Day the Earth Smiled'.

Cassini is an unmanned spacecraft, or space probe. It has been orbiting, or going around, Saturn for the last nine years. The space probe is part of the Cassini-Huygens space project. NASA (National

Aeronautics and Space Administration) and the European Space Agency (ESA) jointly run this space mission.

The Cassini-Huygens spacecraft was named after two astronomers. Giovanni Cassini (1625 – 1712) was an Italian astronomer and engineer. Using a telescope, he was the first person to see four of Saturn's moons. Christiaan Huygens (1629 – 1695) was a Dutch mathematician and astronomer. He discovered Titan, the largest of Saturn's moons.

Cassini-Huygens was launched in 1997. It first flew around Venus and Jupiter before finally reaching Saturn. When it arrived the spacecraft began to orbit the planet. Five months later Cassini-Huygens split in two. Huygens travelled to Titan. It passed through the moon's atmosphere and landed on Titan's surface. Cassini has continued to orbit Saturn since the spacecraft divided.

LEVEL UP!

Use

ONLINE EXTRA

Newsademic.com



TO JOIN VISIT
WWW.NEWSADEMIC.COM

Saturn is the sixth planet from the Sun. It is named after the Roman god of farming, or agriculture. The planet is the Solar System's second largest. The biggest is Jupiter.



Pale Blue Dot photograph taken by Voyager 1. The Earth (shown here inside a blue circle) is the tiny blueish-white speck halfway down the brown band on the right hand side of the picture

Saturn is famous for its rings. (It is sometimes called the ringed planet). Saturn's rings are no more than 20 metres (66 feet) thick. Yet they are about 113,000 kilometres (70,200 miles) wide. The rings are made up of billions of small pieces of ice and dust. The planet has seven rings. These are known, in the order of their discovery, by the letters of the alphabet from A to G.

Saturn is what's called a gas giant. It probably has a solid centre, or core, made up of metal and rock. The gas is mostly hydrogen. The planet, which is about 95 times bigger than the Earth, has 62 moons. Only Jupiter, with 64, has more. Most of Saturn's moons are very small. Only 13 have a diameter greater than 50 kilometres (31 miles).

It takes Saturn about 30 'Earth years' to orbit the Sun. Every 15

years (or half a Saturn year) the Sun is directly above the planet's equator. At this time, when viewed from the Earth, it looks as if its rings have almost disappeared. This is because only their thickness is in line with the Earth and the Sun.

Our planet has been photographed many times by astronauts. However, these pictures have all been taken, in low orbits, or not that far from the Earth. Opportunities to photograph the Earth from the outer part of our Solar System happen infrequently.

The first and most distant photograph was taken in 1990. Then, when it was just beyond Neptune, the Voyager 1 spacecraft captured an image of the Earth. In the picture our planet can just be seen. It is six billion kilometres (3.7 billion miles) away. This famous image of the Earth is now known as the 'Pale Blue Dot'.

Cassini took the second deep space picture in 2006. Yet in this one the Earth could not be seen in its natural colour. Nor was the Moon visible. In Cassini's latest picture a very tiny dot can just be seen right next to the Earth. This is our Moon.

Normally space probes, which travel to the outer Solar System, do not look back towards the Earth. This is because the direct light from the Sun can damage their instruments. For several years, the scientists working at NASA and the ESA carefully made plans for the photograph. They had to get Cassini in exactly the right place at exactly the right time to take the picture. So the photograph was only possible because the Sun, Saturn and the Earth were all in the right position. This may not happen again for many years.

For the last two years a NASA space probe, called Messenger, has been orbiting the planet Mercury. This is the closest planet to the Sun. On 19th July, the same day as the Cassini photograph, Messenger also took a picture of the Earth. The distance from Mercury to the Earth is around 98 million kilometres (61 million miles). This image was easier to capture, as Mercury is between the Sun and the Earth. This meant Messenger's camera did not need to be shielded from the Sun's glare.

NASA scientists encouraged people to 'Wave at Saturn' when Cassini was taking its photograph. Working out the time they should do this was difficult. The scientists had to allow for the 80 minutes it takes reflected light, from the Earth, to get to Saturn. North America and parts of the North Atlantic Ocean were facing Saturn when the image was taken.

The scientists in control of Cassini said they believe 'The Day the Earth Smiled' was a special day. They suggested that on this date everyone should celebrate life on the Earth and reflect on our place in the Universe. ■



GANSU EARTHQUAKE

Several earthquakes struck part of Gansu Province, in north west China on 22nd July. The epicentre was not far from the city of Dingxi, which has a population of 2.6 million. Chinese officials said that the strongest earthquake had a magnitude of 6.6.

The president of China, Xi Jinping, spoke with local officials. He ordered them to send as many rescue workers as possible to Dingxi and the surrounding countryside. Within hours 3,000 police and soldiers began arriving in the worst affected areas. Many of the roads had been blocked by landslides and flooding. It took the rescuers several days to reach some of the more remote villages.



Thousands of buildings collapsed or were badly damaged. Electric supplies were cut. The rescue workers dug through landslides looking for survivors. Tents, medical supplies and extra food and water were sent to the places where most of the buildings fell down.

Officials in Dingxi said that around 30,000 people had been left homeless. They estimated that the number of people killed by the earthquake was around 100. However, they explained this figure was expected to increase.

The Earth's crust is made up of huge pieces called tectonic plates,

or 'plates'. These plates float on the very hot liquid rock deep below the surface. They move slowly at a speed of about two centimetres (0.8 inches) each year. Movements of these plates can cause enormous amounts of pressure, or energy, to build up deep underground.

In western China there are a number of fault lines. These are long cracks in the rocks, which go deep below the surface. When pressure from plate tectonics becomes too great, there can be sudden movements, or land slips, along these fault lines deep underground. When this happens earthquakes occur.

The area of China where the earthquake happened is on what's known as the Lintan-Dangchang fault line. In the past there have been other earthquakes in this area. The worst was over 359 years ago.

In recent years there have been several earthquakes in Sichuan Province, in south west China. The last one was a few months ago. The worst was in 2008. In China this one is known as the Wenchuan earthquake. It had a magnitude of 8.0 and killed around 90,000 people.

Some scientists think that these earthquakes are connected. They believe the more powerful Wenchuan earthquake created large amounts of underground energy. This energy, they say, was the likely cause of the two most recent earthquakes. ■

ROYAL BABY

On 22nd July a royal baby boy was born at a hospital in London, the capital of the UK. The baby's parents are Prince William, Duke of Cambridge, and Catherine, Duchess of Cambridge. The boy has been given the name George Alexander Louis.

The young boy's great-grandmother is Queen Elizabeth the Second, the United Kingdom's reigning monarch. The newly born baby is the third in line to the throne. At some time in the future, he is likely to be the UK's king.



Prince William, Duke of Cambridge, and Catherine, Duchess of Cambridge

The Duke and Duchess of Cambridge (often called William and Kate) were married in 2011. William is the second in line to the throne of the UK. His father, Prince Charles, who is first in line to the throne, is the eldest son of Queen Elizabeth the Second.

The history of the UK's royal family goes back about one thousand years. Since 1688, the country has been a constitutional monarchy. This means the king or queen is the nation's head of state or figurehead. An elected prime minister and parliament run the country. The reigning monarch therefore does not make the important decisions that affect the nation. However, the prime minister has frequent meetings with the monarch. These are to let him or her know what the government plans to do.

Queen Elizabeth the Second's reign began in 1952 after her father, George the Sixth, died. At the time she was only 25 years old. As well as the UK, Queen Elizabeth is the head of state of 15 other countries. Together these are known as the Commonwealth realms. They include Canada,

NewsCAST

SNAIL BEAUTY — A salon in Tokyo, the capital of Japan, has just started to offer its customers an unusual type of beauty treatment. Yet many people think the salon's customers will have to be brave to try it. First the person lies down and their face is washed. Then one of the salon's assistants places three or four live snails on their face. The snails then move across the person's face and cover it with their slime, or mucus. If the snails move in the wrong direction the assistant puts them back on the customer's face. The salon owners claim that the snail slime keeps the skin in good condition and stops it from aging. The one hour-long treatment costs £160 (US\$245).



Australia, New Zealand, Jamaica and Papua New Guinea.

Soon after the baby was born a written [bulletin](#) was displayed on an easel in front of Buckingham Palace. This is the traditional way that royal births are announced in the UK. Crowds gathered outside the palace, which is Queen Elizabeth's London home, to take pictures of the easel and bulletin. Before the birth one newspaper from the USA described the unborn child as 'the world's most famous baby'.

Another tradition for royal births is the ringing of church bells and 'gun salutes'. The bells of Westminster Abbey, in London, were rung for three hours. The firing of gun salutes is a way of celebrating or marking a special royal or important event. Gun salutes were fired at the Tower of London and in a park close to Buckingham Palace. The

Tower of London is a castle, parts of which are over 900 years old.

Gun salutes were also fired in Canada and New Zealand, both of which are Commonwealth realms, and the British territory of Bermuda.

Leaders of all the Commonwealth realms, such as Kevin Rudd and Stephen Harper, the prime ministers of Australia and Canada, sent messages of congratulations.

Baby George will be known as His Royal Highness (HRH) Prince George of Cambridge. In the past there have been six kings called George. So if he does eventually become king he will be George the Seventh. ■

HAMBURG'S NEW MUSEUM

On 24th July 1943, almost 800 air force planes took off from the UK. They flew to northern Germany where they dropped thousands of bombs on the city of Hamburg. Over the next eight days and seven nights many more British and American planes returned to the city. The bombs they dropped almost totally destroyed Hamburg.

Now, 70 years later, a new museum is to open in the city. It will tell the story of what happened to Hamburg and other German towns and cities during these bombing raids.

At the beginning of the Second World War (1939 – 1945) German air force commanders organised hundreds of bombing attacks on the UK. They hoped to destroy many things that would be useful to the UK government in times of war.

These included airfields, factories, railways and docks, or places where ships load and unload what they are carrying.

As the war continued the leaders of the British and American air forces arranged similar attacks on German cities. Like the earlier German air raids on the UK these bombing attacks were supposed to hit military targets. Yet this was difficult, especially when flying at night. Many of the bombs destroyed houses and apartment blocks.

The air raids on Hamburg, which began on 24th July 1943, were given the code name 'Operation Gomorrah'. Gomorrah was the name of an ancient city that is mentioned in the Book of Genesis in the Bible. In the biblical story God decides to destroy the city to punish the people who live there.

The commanders of the British and American air forces wanted to bomb a number of military targets in and around Hamburg. These included oil storage tanks, factories, shipyards and the places where some German U-boats, or submarines, were kept.

The bombing started many fires. Local fire-fighters were unable to put the flames out. After the fires had been burning for several days and nights they created what's known as a firestorm. The flames kept pulling air in from the surrounding areas. This was like a very powerful wind that blew everything towards the burning city.

Thousands of buildings were destroyed. Around 40,000 people are believed to have died during 'Operation Gomorrah'. Many others



Spire of St Nicholas' Church, in Hamburg

were badly injured. Over one million people, or around two-thirds of Hamburg's population, were forced to leave the city.

The new museum will be close to the spire of St Nicholas' Church. For a few years, between 1874 and 1876, this church's spire was the tallest building in the world. It can be seen from far away. The pilots of the bombing aircraft used the spire as a **landmark**. It helped them to work out which part of Hamburg they were flying above.

The church was badly damaged in the bombing. The roof collapsed but its walls remained standing. After the war a decision was made to knock down the nave, or the main part of the church. The tall spire was left as a memorial to what had happened to the city.

The new museum will officially open on 1st September. This is same day of the year on which the Second World War began in 1939. ■

CASHMERE AND SNOW LEOPARDS

A recently written report says that the increase in the demand for cashmere wool is now endangering several types of rare animal. One of these is the snow leopard.

Cashmere wool comes from a number of different species of goat. Most of these are goats that live in mountainous and remote areas in Central Asia, Mongolia and parts of China.

Local farmers, or goat herders, collect wool from their goats' fleeces in the springtime. At this time of year the goats moult, or shed some of their wool. This then re-grows the following winter. The farmers collect the strands of wool. This is then used to make items of clothing, such

as shawls and jumpers, or sweaters. Even though the wool is light, it is very warm. Clothing made from cashmere wool is expensive.



Snow leopard

As the worldwide demand for cashmere has increased more and more goats are being kept. The farmers have increased the size of their herds because they are able to sell the extra wool. For example, in 1990 there were about five million goats in Mongolia. Ten years later this number was between 13 and 14 million.

The herds of goats wander, or roam, over large areas searching for food. The problem is that they are now eating more and more of the grass. Wild plant-eating animals, or herbivores, also eat this grass. Many of them are already endangered. They include bharals, which are a type of wild sheep, wild yaks, Tibetan antelopes and a rare type of wild horse. As goats 'take over' larger and larger areas the wild animals have less grass to feed on.

Snow leopards are smaller than other types of leopards such as those found in Africa. They have pale-coloured fur with dark grey and black spots. Snow leopards are rarely seen. They live in remote places, such as snowy mountainous areas. Here, because of the colour of their fur, they are difficult to spot.

It's thought the total number of snow leopards living in the wild is between 4,000 and 6,500. As there are not many of them the animals

are hard to find. It has therefore been difficult for scientists to study the behaviour of snow leopards and learn more about them.

The report says that the increasing number of goats is also affecting snow leopards. The leopards are carnivores, or meat-eaters. They prey on the herbivores. As the number of plant-eating animals decreases the snow leopards are finding it harder to get enough to eat.

Another problem is that the goat farmers are now shooting snow leopards. The farmers will do this if the leopards are found to be attacking their goats.



Goat herd in Central Asia

The report suggests that special meetings should be arranged. These, it says, would be between leaders of villages, where there are many goat herders, and the people who buy the wool. The two groups could then discuss what the farmers can do to both make money from their goats and protect the endangered animals. ■

NORTH KOREAN SHIP STOPPED

On 15th July a ship from North Korea, called the *Chong Chon Gang*, was about to enter the Panama Canal. Officials from Panama were suspicious. They ordered the ship's captain to stop. He was then told to sail his ship to a port near the canal's entrance.

The *Chong Chon Gang* was planning to sail from the Atlantic Ocean

side of the Panama Canal to the Pacific Ocean. The officials in Panama suspected that it might be carrying illegal drugs. A search of the ship then began. Several [containers](#) were found hidden under hundreds of heavy bags of sugar. Inside were different types of weapons.



Chong Chon Gang

North Korea is a very secretive country. Members of one family have ruled North Korea for 65 years. Its current leader Kim Jong-un took over after his father died at the end of 2011. Little is known about North Korea's leader, but he is thought to be about 30 years old.

Many people think North Koreans have been 'brainwashed', or persuaded to believe that their leaders are god-like and never do anything wrong. People living there may not leave the country without special permission. Few visitors are allowed. Even though many people in the country do not have enough to eat, North Korea spends most of its money on weapons and its huge army.

Some people describe North Korea as one of the world's last remaining Stalinist states. The word Stalinist comes from Joseph Stalin (1878 – 1953). He was a former communist leader who controlled the Russian-led Soviet Union under very strict rules. People who criticised him were often sent to prison, or sentenced to death.

Over the last ten years North Korea is known to have developed

several nuclear weapons. It has also been testing long-range missiles. The North Korean leaders claim that they need these weapons to defend their country from an American attack. They are also suspicious of South Korea, as it works closely with the USA.

To try to get North Korea to give up its plans for nuclear weapons the United Nations (UN) has passed several resolutions, or formal proposals. These say that no UN member country is allowed to send weapons to, or receive weapons from, North Korea. The UN also gave members permission to stop and search ships sailing to or from North Korea. Yet, they could only do this if they suspected that the ship was carrying things that were banned, such as illegal drugs or weapons.

After the weapons were found on the *Chong Chon Gang* Panama asked the UN for help. The ship's captain and crew were arrested. As the search continued more containers and military equipment were found. These included two fighter aircraft, some plane engines, missile parts and several anti-aircraft weapons.

After they were discovered officials in Cuba admitted that the containers had come from their country. The North Korean ship had travelled to Cuba to pick them up. However, they said all the equipment inside them was obsolete, or very old. They claimed it was being sent to North Korea for repair. Cuba is one of the other few remaining communist countries in the world. Experts think the equipment is at least 30 years old. This means it dates back to the time when the Russian-led Soviet Union and Cuba were allies.

North Korea has demanded that the crew be freed and the ship, with its containers, be allowed to return.

This is unlikely to happen. Some people now expect the UN to punish Cuba for ignoring the ban on sending weapons to North Korea. ■

WORLD YOUTH DAY

Each year an event called World Youth Day (WYD) is organised by the Roman Catholic Church. It is a gathering of younger people who follow the Roman Catholic faith.

Every two or three years a much larger and longer WYD international event is organised. The latest of these began in Rio de Janeiro, one of the largest cities in Brazil, on 23rd July. These longer events last for four or five days. The last one was held in Madrid, the capital of Spain, in 2011.



Pope Francis in Rio de Janeiro

World Youth Day 2013 was the second to be held in a South American country. The earlier one took place in Buenos Aires, the capital of Argentina, in 1987. This year's WYD is the first to be held in a country where Portuguese is the main language. There are more Catholics in Brazil than in any other country. Many people in South American countries follow the Roman Catholic faith. Thousands of them travelled to Brazil to attend the WYD.

Traditionally the pope, or leader of the Catholic Church, takes part in some of the international WYD

events. Pope Francis arrived in Rio de Janeiro on 22nd July. He only became the pope, or pontiff, four months ago. This was after the previous pontiff, Pope Benedict the Sixteenth, decided to retire, or stand down.

The pope is based in the Vatican. This is the headquarters of the Roman Catholic Church. Even though Vatican City is in Rome, the capital of Italy, it is a separate city-state. The pontiff is also known as the Bishop of Rome.

Pope Francis is from Argentina. Before being appointed as the church's new leader he was the Archbishop of Buenos Aires. His visit to Rio de Janeiro was his first trip outside Italy since he became Bishop of Rome. Pope Francis often talks about the importance of protecting children and the elderly, especially those who are poor and need help.

After Pope Francis's plane arrived at the airport Dilma Rousseff, the president of Brazil, met him. He then travelled around the city in an open topped car. Tens of thousands of people lined the streets to greet him.

In recent months there have been large street protests in Brazil. Those who took part were complaining about many things. One was that the country was spending too much money on large sporting events. The next Football World Cup and the 2016 Olympic Games are due to be held in the country. It costs huge sums of money to host these international sporting events. The protesters claim that this money would be better spent on improving the country's schools and hospitals. Some Brazilians are unhappy about the pope's visit. This is because it is expected to cost at least £50 million (US\$77 million).

Pope Francis met with some young prisoners. He also visited one of Rio de Janeiro's favelas, or shanty towns. These are mazes of makeshift houses, or shacks, built from pieces of wood, metal and plastic sheets. There is no street plan and many of the houses have no electricity, telephones or running water. Rio de Janeiro's favelas are where the city's poorest people live.

During his visit Pope Francis attended many religious services. One was a huge open-air gathering for over 400,000 people on Rio de Janeiro's famous Copacabana beach. ■



TREATY OF UTRECHT ANNIVERSARY

The choral music *Utrecht Te Deum* was first performed on 13th July 1713, at a cathedral in the city of London. The famous music composer, George Frideric Handel, wrote it. Handel composed *Utrecht Te Deum* to celebrate the signing of the Treaty of Utrecht.

In 1713 several European countries signed a number of agreements, or treaties. Together these agreements are known as the Treaty of Utrecht. They helped to bring an end to a 'world war' that lasted for 13 years.

This year, 13th July, was the 300th anniversary of the first performance of Handel's *Utrecht Te Deum*. It was also the 300th anniversary of the signing of an agreement between Spain and Britain, which was part of the Treaty of Utrecht.

The conflict that the Treaty of Utrecht helped to end is known as the War of the Spanish Succession (1701 – 1714). In 1700 the king of Spain, Charles the Second, died. He

did not have any children, or heirs. The kings of France and Austria then both claimed that they had a right to the Spanish throne.

Their argument led to a war in which many European countries became involved. These included France, Spain, Portugal, Britain, Austria, the Netherlands, and Prussia (now part of northern Germany). When the war began Spain controlled the Netherlands. On one side was France, together with the people in Spain who supported the French king. The other side was an [alliance](#) of Portugal, Austria, Britain, Prussia and those in Spain who disliked the French king.

By the time the war began several European countries had set up colonies in what was then called the 'New World'. Today we know the New World as North and South America as well as the islands of the Caribbean, or West Indies. The war's largest battles were in Europe. Yet some fighting also took place in North and South America and the West Indies. This is why the War of the Spanish Succession has been described as a 'world war'. It's thought that around one million people were killed in the conflict.



1713 Treaty of Utrecht documents (front pages)

Unusually for the time the war did not end with a battle where there was a winner and a loser. Instead diplomats from each of the countries involved met in the city of Utrecht, in the Netherlands. They wanted to

end the war. Yet to do this they had to find a way of making sure that there was a 'balance of power' in Europe. This meant that, when the war ended, none of the countries involved would have too much power.



George Frideric Handel

The talks in Utrecht lasted for 15 months. Eventually, a treaty was worked out that all the countries agreed to. This was the first time in world history that diplomacy had ended a major war. Some historians even believe that the origins of the United Nations (UN) can be traced back to the Treaty of Utrecht [negotiations](#).

As part of the Treaty of Utrecht Spain agreed that Britain could take control of Gibraltar. This is a small area of land close to the entrance of the Mediterranean Sea. Today it is still a British [territory](#). On 13th July many people in Gibraltar took part in events that marked the 300th anniversary of the treaty signed by Spain and Britain.

Handel (1685 – 1759) was born in Germany but later became a British citizen. As a young man he trained in Italy and the country of his birth before moving to London. Some people think Handel is one of the world's greatest composers. Many of his choral compositions such as *Water Music*, *Music for the Royal Fireworks* and *Messiah* are very popular today. ■

DRUG LORD CAPTURED

On 15th July, specially trained troops in Mexico managed to capture one of the 'world's most wanted men'. The man they caught is Miguel Ángel Treviño Morales. He is the leader of one of Mexico's largest drug gangs. These gangs are often called drug cartels. The leaders of these criminal gangs are known as 'drug lords'.

For many years Mexico has had serious problems with drug cartels. They make a lot of money by smuggling drugs into the USA and other countries. At least eight different drug cartels operate in the country. The gangs get illegal drugs from South American countries, such as Colombia and Peru, where they are grown or produced. These drugs include cocaine, heroin and cannabis. After arriving in Mexico the drugs are unlawfully taken across the border into the USA in trucks, or along secret tunnels.

In recent years the drug cartels have also been making money by smuggling people across the border. These people, who have to pay the drug cartels large sums of money, are mostly from Central American countries. They want to get to America, as they believe life will be better in the USA.

The Mexican drug cartels frequently fight against each other. Officials estimate that since 2006 around 70,000 people have been killed in these 'drug wars'. [Abductions](#), or kidnappings, are another frequent crime. Gangs kidnap members of wealthy families and demand money, or a ransom, for their return.

In 2006 Felipe Calderón was elected as Mexico's president. Soon afterwards he sent thousands of soldiers to help the police in some

parts of the country. The soldiers' job was to assist in the arrest of drug cartel members.

Later Mr Calderón ordered the police and the army to target, or try to capture, the bosses of the drug cartels. Not everyone agreed with his plan. These people said that when the cartel's leader is captured it splits into lots of smaller gangs. This, they argued, made the problem even worse. Last year, Enrique Nieto became the country's new president. He said he wanted the police and army to spend more time catching all the gang members, and not the leaders. The recent capture of Treviño Morales seems to show that Mr Nieto may have changed his mind.

The gang that Treviño Morales led is known as the Zetas Cartel. Some time ago the Mexican government said it would pay a reward of 30 million pesos (£1.55 million) for information that led to the arrest of Treviño Morales. The government of the USA was also offering a reward of US\$5 million (£3.3 million) for this type of information.



Enrique Nieto

Treviño Morales was captured close to the American border. It's thought that American law [enforcement](#) officers helped the Mexican troops to find the Zetas Cartel leader. It was reported that he was captured in a truck, which was carrying many weapons and a large amount of money. He will now be put on

trial and probably sent to prison for many years.

Some people in Mexico predict that Treviño Morales's arrest means the drug violence is likely to get worse. This is because other drug lords will now try to take over the drug trade in the places where the Zetas Cartel operates. ■

NEPTUNE'S NEW MOON

An American astronomer – a scientist who studies the planets and the stars – has discovered a new moon. The moon, which is only 20 kilometres (12 miles) across, is orbiting, or going around, Neptune.

In our Solar System Neptune is the farthest planet from the Sun. Like Uranus, Saturn and Jupiter it is a 'gas giant'. The Solar System's other four planets, Mercury, Venus, Earth, and Mars are what are known as 'rocky planets'. Neptune is almost four times the size of the Earth.

It was thought that Neptune had 13 moons. So the recent discovery has increased this number to 14. The planet's largest moon is called Triton. This moon was first seen soon after Neptune was discovered in 1846. Triton is unusual. This is because it orbits in the opposite direction to Neptune's spin, or rotation. The 13 other moons all orbit in the same way that Neptune rotates. What Triton does is known as a retrograde orbit.

It was not until 140 years after the discovery of Triton that some of Neptune's other moons were seen. As the Voyager 2 spacecraft flew past Neptune in 1989 it recorded several of them. The planet's other moons were discovered between 2002 and 2003.

The newly found moon has been given the temporary name

S/2004 N 1. It is smaller than all the others. The American scientist noticed it when he was studying a series of photographs of the area around Neptune. The Hubble Space Telescope had taken these images.

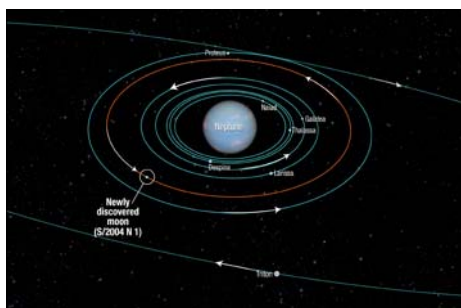


Diagram showing some of Neptune's moons

Hubble was taken into space by an American space shuttle in 1990. The telescope is in what's known as a low orbit, or around 600 kilometres (375 miles) above the surface of the Earth. As it is outside the Earth's atmosphere the telescope is able to take very clear pictures of objects far out in space. It was the Hubble telescope that helped astronomers to work out that the Universe is about 13.7 billion years old.

The Hubble telescope is named after the American astronomer Edwin Hubble (1889 – 1953). He discovered galaxies beyond our own Milky Way. He was also the first person to work out that the Universe is expanding, or getting bigger and bigger.

Neptune was named after the Roman god of the sea. All the planet's moons have been given names of other sea gods from Roman or Ancient Greek [mythology](#). For example, Triton was the son of Poseidon, who was the Greek god of the sea. Proteus, another one of Neptune's moons, is the name of a shape-changing god of the sea in Greek [mythology](#). Therefore S/2004 N 1 is likely to be named after one of the other Greek or Roman sea gods.

Anyone who discovers a new moon can suggest a name for it. Their suggestion has to be sent to the International Astronomical Union (IAU). This organisation has its headquarters in Paris, the capital of France. The IAU decides what names should be used for newly discovered moons. For example, the IAU recently chose Kerberos and Styx for two new ones. These moons, which were found a few years ago, are orbiting the dwarf planet Pluto. ■

PREDATOR OR SCAVENGER?

For many years there has been a disagreement or debate between some palaeontologists – scientists who study fossils and prehistoric life – about *Tyrannosaurus rex*. Some believe the dinosaur was a hunter, or predator, while others suspect it was a scavenger. A new fossil has recently been discovered that may have settled the argument.



'Sue' in the museum in Chicago

Tyrannosaurus rex (*T. rex*) is often called the 'king of the dinosaurs'. It is one of the largest carnivores, or meat-eaters, of all time. *Tyrannosaurus* comes from two Ancient Greek words that mean 'tyrant' and 'lizard'. *Rex* means 'king' in Latin.

T. rex skeletons show that some were 13 metres (43 feet) long. The dinosaurs had a large head, upright body and a long heavy tail. Their teeth were long and sharp. A *T. rex*'s bite was the strongest of any known

creature. The dinosaur's hind limbs, or back legs, were large and powerful but its forelimbs, or arms, were very much smaller.

Many scientists have always thought that *T. rex* was a fast-moving predator. They believe it chased and caught smaller dinosaurs to eat.

Yet others are not so sure. They think that *T. rex* mostly ate the meat from the bodies of other animals that had already died or been killed. Creatures that do this are known as scavengers. Those who do not believe *T. rex* was a predator argued that it was probably too slow to catch other fast moving dinosaurs. They also say its arms would not be able to grip, or hold on to, its prey. This is because they were too short.

The recently discovered fossil is a small part of a dinosaur's tail. The fossilised vertebrae, or tailbones, were found in the state of South Dakota, in the USA. They come from a type of dinosaur called a *hadrosaur*. These dinosaurs were herbivores, or plant eaters. They were also fast runners. The tailbones are believed to be more than 70 million years old.

Stuck in one of the tailbones is a broken off *T. rex* tooth. What's more it looks as if the bone has grown around the tooth. This shows that the *hadrosaur* must have lived for several more years after it's tail was bitten. The fossil therefore suggests that the *hadrosaur* was attacked by a *T. rex*. It bit the *hadrosaur*'s tail and then lost one of its teeth. But the *hadrosaur* managed to escape. Those that found the fossil claim it shows that *T. rex* did hunt other dinosaurs.

However, not everyone is sure that the new fossil is proof that *T. rex* was a predator. These scientists say it shows that a *T. rex* did bite another dinosaur. Yet it does not prove that the *T. rex* was chasing it. Some

scientists say the debate about *T. rex* is a false argument. This is because they believe the dinosaur was probably both a hunter and scavenger.

The most complete *T. rex* skeleton in the world is in a museum in Chicago, in the USA. Nicknamed 'Sue', after the woman who discovered it, the fossilised skeleton was dug up in the state of Dakota, in 1990. 'Sue' is estimated to have died about 67 million years ago. ■

SILVER TREASURE RECOVERED

An American company, called Odyssey Marine [Exploration](#), has managed to recover a large amount of silver from a shipwreck. The company first found the wreck of the Steam Ship (SS) *Gairsoppa* two years ago. It is on the seabed, not far from the southern coast of Ireland, at a depth of nearly five kilometres (three miles).

The *SS Gairsoppa* was a British [merchant](#) navy ship. It was named after some waterfalls in India. The ship was sunk during the Second World War (1939 – 1945) in 1941. Merchant ships carry goods between countries. In times of war governments often use merchant ships to carry military supplies, equipment and soldiers.

At the time of the First World War (1914 – 1916) the UK had a large merchant navy. During the war many of these ships were used to carry food supplies and troops from places as far away as New Zealand and Australia. Yet German submarines firing torpedoes managed to sink hundreds of them. To

try to stop this from happening merchant ships began travelling in large groups called convoys. Navy warships protected these convoys. Yet many ships were still hit and sunk.



SS Gairsoppa

In the Second World War a similar thing happened. German submarines sank hundreds of British merchant ships including the *SS Gairsoppa*. It had left India in December 1940 carrying iron, tea and a large amount of silver. The ship was part of a large convoy. However, in the North Atlantic Ocean the captain of the *SS Gairsoppa* decided to leave the convoy and sail to Ireland. This was because the ship was running out of coal and the seas had become very rough.

Soon after it left the convoy a torpedo fired by a German submarine hit the *SS Gairsoppa*. The torpedo damaged the ship's radio equipment so those on board were unable to communicate, or call for help. The *SS Gairsoppa* sank very quickly. Of the 85 crew members on board only one survived. The rest of the convoy safely reached the city of Liverpool, in the UK, six days later.

The cost of finding shipwrecks on the sea floor and recovering any of the items they were carrying is very expensive. Before it began to look for the *SS Gairsoppa* the Odyssey Company made an agreement



One of the silver ingots

with the UK government. This said that 20% of any silver found on the wreck would be handed over to the government. The company would then be allowed to keep the rest.

Using a small remotely operated vehicle (ROV) Odyssey managed to find the wreck of the *SS Gairsoppa* in 2011. The following year Odyssey's ship returned to the site. This time the ROV cut a hole in the side of the wreck. The ship's crew then managed to bring around 1,200 silver ingots, or bars, to the surface.

However, the company believed that more silver ingots had been stored in a different part of the *SS Gairsoppa*. This year they went back to the site of the wreck to try to find them. On 20th July the company said that, this time, it had managed to recover almost 1,600 silver ingots. Odyssey believes that it has now found all but 25 of the 2,817 ingots that were on board the *SS Gairsoppa* when it sank. The silver recovered from the wreck is thought to be worth at least £40 million (US\$61 million).

While searching for the *SS Gairsoppa* Odyssey discovered another wreck. This one is a passenger ship. Called the *SS Mantola*, it was sunk by a German submarine during the First World War. It too was carrying a large amount of silver. Odyssey says it now plans to try to recover this silver as well. ■

ASYLUM SEEKERS IN AUSTRALIA

On 19th July Kevin Rudd, the prime minister of Australia, and Peter O'Neill, the prime minister of Papua New Guinea (PNG), made a joint announcement. They said that people caught trying to illegally travel to Australia by boat would now be

taken to PNG. There, they will be held in a specially built detention camp. This camp is on the island of Manus, which is part of PNG.

People who try to travel to Australia unlawfully are known as asylum seekers. Many come from countries such as Iran, Iraq, Sri Lanka, Afghanistan, and Indonesia. All want to get to Australia because they are seeking a better life.



Part of the detention camp on Manus Island, in Papua New Guinea

Asylum seekers who travel to Australia by sea are called boat people. They often have a dangerous journey. These people pay boat owners, in countries such as Indonesia, large sums of money to take them to the Australian coast. Those who arrange these boat trips are known as people smugglers. The boats are usually old and nearly always overcrowded. Some of the boats have sunk in rough seas. When this happens most of those onboard drown.

Australia has had a 'boat people' problem for many years. In the past many of those who arrived were allowed to stay. Yet this seemed to encourage more and more boat people to make the dangerous journey.

In 2001 the government set up two detention camps. One on Nauru, a small Pacific island country, and the other on Manus Island. Everyone caught trying to enter Australia illegally was sent to one of these camps. There they were interviewed. Some, after spending several years

in the camps, were eventually given permission to move to Australia. In return for allowing the camps to be set up Australia paid money, or aid, to Nauru and PNG. These detention camps became known as the 'Pacific Solution'.

It was hoped that these camps would deter people from, or put them off, trying to get to Australia. If asylum seekers knew they would be sent to a detention camp, in a place that is not part of Australia, then they would not make the journey. Yet this has not happened. So far over 200 boats, carrying around 15,000 people, have been stopped near the Australian coast this year.

This is the second time that Mr Rudd has been prime minister of Australia. During his first term as the country's leader he disagreed with the Pacific Solution and closed the camps. Julia Gillard, his successor, tried to set up a detention camp for boat people in Malaysia. But this caused legal problems. Last November she decided to re-open the camps in Nauru and PNG.

Mr Rudd took over from Ms Gillard, as prime minister, last month.

There are two main political parties in Australia, the Labor Party and the Liberals. The Pacific Solution was set up under a Liberal government. Mr Rudd and Ms Gillard are members of the Labor Party.

Mr Rudd says that boat people will now be taken to Manus Island. From there some will be sent back to their own countries. Others will be allowed to live in PNG, if they wish to. None of them will be given permission to move to Australia. Mr Rudd claims that this is the only way to stop the people smugglers. As part of the new arrangement the Australian government will help to set up new hospitals and a university in PNG.

The asylum seeker problem causes many arguments in Australia. Nowadays most Australians seem to think boat people should not be allowed to enter their country. An election is due to be held in Australia within the next few months. The Liberals are expected to win. Some people therefore think Mr Rudd made the arrangement with PNG to try to get more people to vote for his party. ■

PITCH DROP RECORDED

Sixty-nine years ago a laboratory 'pitch drop' experiment was set up at a university in Dublin, the capital of Ireland. It is one of the world's longest-running experiments. On 11th July, for the first time ever, a drop of pitch, dripping, or falling, from the end of a [funnel](#) was recorded by a webcam.

Pitch is a substance that is also known as bitumen, asphalt, tar and tar pitch. It can form naturally. For example, lumps of bitumen are sometimes found floating on the Dead Sea, which is on the border between Israel, Jordan and the West Bank. It can also be made, or manufactured, from crude oil. Pitch made from oil is black. This explains where the expression 'pitch-black' comes from.

Many years ago heated pitch was used to waterproof wooden boats and containers. Today, in some parts of the world, it is still used for torches. The light comes from pitch on the end of a wooden stick or pole, which has been set on fire. Nowadays, pitch is one of the substances that are often used to make roads.

At normal, or room, temperature pitch seems to be a hard substance. If a lump of pitch, or bitumen, is hit with a hammer it will shatter like glass.

Pitch drop experiments were set up to show that even though it looks and feels like a hard substance it still flows (very slowly) like a liquid.



Pitch drop experiment in Dublin, in Ireland

For a pitch drop experiment a lump of bitumen is heated and then poured into a glass funnel. At first the end of the funnel is sealed, or closed off. The pitch inside the funnel is then left for several years for it to settle. Then the closed end of the funnel is cut off, or opened. This means that the pitch inside the funnel can now drip onto the surface below.

The oldest pitch drop experiment was set up at a university in Australia in 1927. This is the longest-running laboratory experiment in the world. Since then only eight drops of pitch have dripped from the funnel.

On average this is roughly one drop every ten years. However, none of the falling drops have ever been seen, filmed or digitally recorded. The drops take between seven and 13 years to form but only one-tenth of a second to fall. This experiment's last drop was in 2000. A video camera had been set up to record it. Yet when the drip fell the camera was not working.

The pitch drop experiment in Dublin was set up in 1944. When scientists at the university noticed a drip forming last April they set up a webcam. The drop of pitch that

fell on 11th July was the first ever to have been recorded.

Liquids can be measured or compared by their 'thickness' or viscosity. For example, honey has a higher viscosity than water. The scientists in Dublin say they have discovered several things about pitch from studying the latest drop. One is that its viscosity is 20 billion times more than water.

The next pitch drop in Australia is expected to happen some time this year. This time several webcams have been set up to record it. ■

HELICOPTER PRIZE FINALLY AWARDED

A group of engineers, working at a university in Canada, have won a special competition. They have been awarded a US\$250,000 (£163,000) prize for being the first to build, and fly a 'human-powered helicopter'.



Human-powered helicopter, AeroVelo Atlas

In 1980 the American Helicopter Society (AHS) announced that it had set up a special competition. To win, a person, or team, had to build a helicopter that could be powered by a human. The competition rules said that it would have to reach a height of three metres (9.8 feet) and fly for at least 60 seconds. The helicopter would also have to be able to [hover](#) above the ground without moving too far forwards or backwards. Over the last 33 years many teams have

tried to win the prize. Yet, until now, all have failed.

The full name of the award is the Igor I Sikorsky Human Powered Helicopter Competition. The AHS set up the award in honour of Igor Sikorsky. He was one of the founders of the AHS. Sikorsky (1889 – 1972) was born in the Ukraine, which, at that time, was part of the Russian Empire. Two years after the Russian Revolution in 1917 he moved to the USA.

In Russia he helped to design some of the country's first planes. After he arrived in America he worked as a schoolteacher. Several years later he set up an aircraft building company. It became well-known for the flying boats it designed and built. These planes had floats instead of wheels and took off and landed on water.

Sikorsky was interested in vertical flight. He designed and built

the first mass-produced helicopter, called the Sikorsky R-4, in 1942. Most modern day helicopters use a similar design to the R-4.

When it was first set up the AHS prize was for US\$10,000 (£6,500). Over the years there have been several entries, including one from Japan. Yet these did not get high enough off the ground, or failed to stay in the air for at least 60 seconds. As these attempts were unsuccessful the AHS continued to increase the prize money. It was raised to US\$250,000 (£163,000) in 2009.

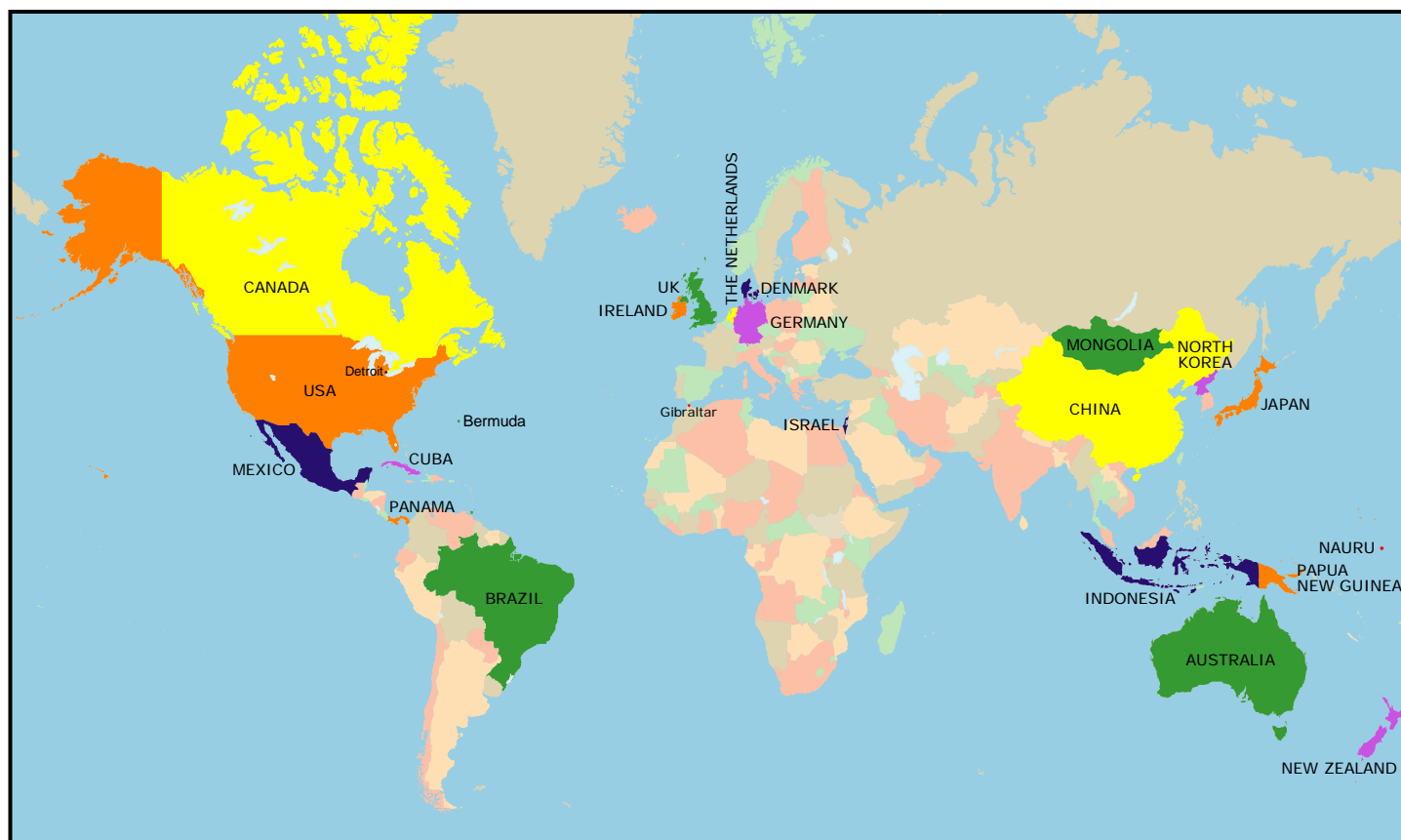
The engineers who won the prize are studying or working at Toronto University. They first began testing their human-powered helicopter over 12 months ago. Called the AeroVelo Atlas it is square-shaped with a large rotor blade at each corner. It takes up a big area. The diagonal distance from one rotor to another

is 49 metres (162 feet). A person riding a bicycle in the centre of the 'square' generates the power needed to turn the rotor blades. Everything is made from very light material. The whole 'machine' (without the bicycle rider) only weighs 55 kilograms (121 pounds).

The prize-winning flight took place in an indoor football stadium in Toronto. The 'pilot', or person doing the pedalling, had trained to take part in bicycle races. ■

ROYAL SOCIETY AWARDS

The Royal Society has awarded medals to the two scientists who discovered graphene. This organisation, which is based in London, the capital of the UK, was founded in 1660. It is the world's oldest academy of science. Many of the world's



This map shows countries to which news stories refer in this issue. Visit www.newsademic.com for more detailed world maps.

most important scientists are members of the Royal Society.

The two scientists, Professor Andre Geim and Professor Kostya Novoselov, work at Manchester University, in the UK. In 2012 both men were given knighthoods by the UK government for their scientific work. This means they are now Sir Andre Geim and Sir Kostya Novoselov.



Sir Andre Geim

Sir Kostya Novoselov

In the past the two scientists spent a small amount of time each week investigating things that interested them. They normally did this on Friday afternoons instead of working on big research projects. One Friday they stuck some cellophane tape to a piece of graphite.

Graphite is a type of carbon. The 'lead' in pencils is made from graphite (it does not come from the soft metal called lead). Usually graphite in pencils is mixed with clay. Yet very soft pencil leads, which are used for drawing, are almost all graphite.

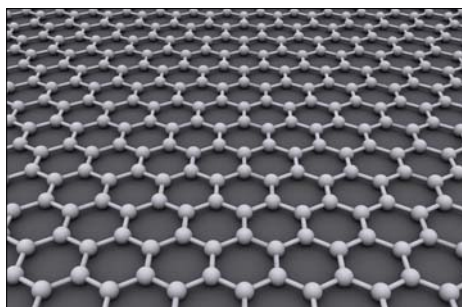
The carbon atoms in graphite are arranged in sheets stacked one on top of the other. Within each sheet, the carbon atoms are attached to three others. This creates six-sided figure patterns, or hexagons (imagine chicken wire or the cross-section of a honeycomb). The sheets of carbon atoms in graphite are able to slide over one another, which is why it feels rather slippery.

The two scientists examined what was stuck to the tape once it was peeled off the piece of graphite. On the tape was a single sheet of

carbon atoms. They called the new material graphene. Later they found that even though each sheet of carbon was just one atom thick, it was incredibly strong.

Graphene is believed to be the thinnest and strongest material in the Universe. It is about one million times thinner than the width of a human hair and 200 times stronger than steel of the same thickness. Graphene is also very light. What's more it is a good conductor of heat and the best conductor of electricity ever discovered.

Graphene's unusual [properties](#) could have many uses, especially to make very light but extra-strong materials. Touch-screen phones and computers made from these would be able to bend without breaking. Many people predict that, in future, graphene will change electronics and the way in which things like cars and spaceships are designed and built.



Model of carbon atoms in graphene

The Royal Society gave Sir Andre the Copley Medal. This medal was first awarded in 1731. It is named after Sir Godfrey Copley (1653 – 1709). As a member of the Royal Society he provided the money for the medals. The Copley Medal is given for 'outstanding achievements in science'. In the past Copley Medals have been awarded to many famous scientists. They include, Charles Darwin, Albert Einstein and Stephen Hawking.

Sir Kostya was given the Leverhulme Medal. This dates back to 1960. The Royal Society awards this medal for 'outstanding achievements in chemistry or engineering'. It is named after William Lever (1851 – 1925), who was given the title 1st Viscount Leverhulme. The company he set up, Lever Brothers, was famous for making soap. It is now part of the Unilever Company, which operates all around the world. ▣

DETROIT BANKRUPTCY

On 18th July a senior official from Detroit, in the USA, announced that the city was bankrupt. This means that Detroit is now unable to repay any of the money that it has borrowed in the past. Detroit is the largest city in the state of Michigan.

In the USA a company can go to court and apply for what's known as 'Chapter 11' bankruptcy. A company does this if it can no longer pay its debts. The rules of Chapter 11 mean that a company is given time to reorganise, or restructure, its business and to try to start making money again. While a company is in 'Chapter 11', it has protection from all the organisations to which it owes money.

When a city or county in the USA declares it can no longer pay its debts it is known as a [municipal](#) bankruptcy. This is different from a company bankruptcy. Cities or counties borrow money by selling bonds. The money received from selling these bonds has to be repaid in future. This could be in 5, 10 or 20 years time.

If the city or county cannot pay this money back they can apply for 'Chapter 9' bankruptcy. This gives them time to negotiate with the

bondholders, or the companies that bought the bonds. When a city or county declares bankruptcy bondholders are unlikely to get back all of the money they paid for the bonds.

Until now the largest municipal bankruptcy in the USA was Jefferson County, in the state of Alabama. This happened in 2011. Then, it was calculated that the county owed about US\$4 billion (£2.6 billion). Detroit's debts are believed to be at least four times as much. This means it is the USA's largest ever municipal bankruptcy.



Abandoned car factory in Detroit

In the past Detroit was a very successful city. In 1910 Henry Ford, the founder of the Ford Motor Company, opened a factory in Detroit. It was the first factory in the world that mass-produced cars. Over the years other large car-making companies opened factories in the city. This is why Detroit is often called 'Motor City'.

In more recent years, car-making companies in other countries, such as Japan, have been selling more and more cars in the USA. Over time American carmakers decided to close many of their factories in Detroit. In 1950 nearly 300,000 people worked in these factories. Today there are only around 30,000 factory jobs in Detroit. As the factories closed many people left the city. In 1950 Detroit's population was roughly two million. Now it is about 700,000.

The centre of the city has many new modern buildings. One is the headquarters of General Motors (GM). Yet about 78,000 buildings, including houses and factories, surrounding the city centre have been abandoned. Few people live in these areas. The roads have not been repaired and grass and other plants have been left to grow.

The person who announced the bankruptcy said that city officials and workers had made many errors in the past. He said there had been mismanagement and corruption, or dishonesty. Many local taxes have not been collected. The city's computer systems are out of date and not looked after.

The bankruptcy will cause many problems. For example, the city still needs to pay the [pension](#) payments of former city workers who have retired. Some have suggested that Detroit's parks and all the paintings in its museum should be sold to raise money. Yet others claim it would be unlawful to do this. The city's bankruptcy is likely to lead to legal arguments and take many years to resolve. ■

PEACE TALKS TO RESUME

On 19th July John Kerry, the USA's secretary of state, made an important announcement. He said that Israeli and Palestinian leaders had agreed to further peace talks. The last time there were direct negotiations between Benjamin Netanyahu, Israel's prime minister, and Mahmoud Abbas, the president of the Palestinian Authority (PA), was three years ago.

In the USA the secretary of state is one of the most important positions in the government. This person is responsible for foreign policy, or dealing with other countries. Since he

became secretary of state seven months ago Mr Kerry has made a number of visits to Israel, Jordan and the West Bank. Making frequent trips to try to solve international problems is often called 'shuttle [diplomacy](#)'.

The problems between the Palestinians and Israelis first began over 60 years ago. In 1948 the USA and the United Nations (UN) helped to set up a new Jewish state, or country, in an area of the Middle East known as Palestine. Called Israel, many Jewish people from Europe and other parts of the world went to live in the new country.

At that time many Palestinians, who lived in the area that became Israel, were forced to leave their land and homes. Most had to move to refugee camps in nearby countries. After the set up of Israel, Jewish people had their own country. Yet many Palestinians were left without one.



Nearby Arab countries were angry about what had happened. The set up of a new Jewish state led to several wars between Israel and the surrounding Arab nations. Israel, supported by the USA, won them easily. It captured the West Bank from Jordan, the Golan Heights

from Syria, and the eastern half of Jerusalem. It also occupied the Sinai Desert (part of Egypt) but later handed it back.

Many Jewish people in America hold senior positions in government and business. These people have been nicknamed the 'Jewish **Lobby**'. Most political experts say the Jewish Lobby's influence means an anti-Israel politician is unlikely ever to be elected as the president of the USA. This is why the USA has been involved in all peace talks between the Palestinians and Israel.

The PA consists of two unconnected areas called the Gaza Strip and the West Bank. It was set up in 1994, after peace talks held in Oslo, the capital of Norway. Although the PA is not a country, its formation allowed the Palestinians to govern themselves. In 2007 fighting broke out between two Palestinian groups. Now a group called Hamas runs the Gaza Strip. A different organisation called Fatah, of which Mr Abbas is a member, controls the West Bank. Some areas of the West Bank are still occupied by Israel.

Hamas is both a political and military organisation. Much of the recent fighting in the area has been between Hamas supporters in the Gaza Strip and Israeli troops.

Since capturing parts of the West Bank and East Jerusalem, Israel has been building groups of houses and apartments there. These are known as '**settlements**'. Now over 500,000 Israelis live in these settlements. Most Palestinians insist that everyone living in these places will have to leave before any peace deal is signed.

Most people agree there must be a 'two-state solution' to bring peace. This means the land has to be divided between a new state of Palestine and the state of Israel. But

there are many difficult problems to be solved. These include where the new countries' borders will be and what will happen to East Jerusalem and the Israeli settlements in the West Bank. What's more Hamas has already said that it disagrees with the peace talks.

On the day after Mr Kerry's announcement, Israel said it would release some Palestinians that are being held in Israeli prisons.

The first talks are expected to be held in Washington DC, the capital of the USA, within the next few weeks. Senior officials from each side will attend these. If they go well arrangements will then be made for Mr Netanyahu and Mr Abbas to meet. The last peace talks between these two leaders, three years ago, quickly ended in disagreement. ■

APE MEMORIES

Scientists in Denmark have completed a number of experiments with chimpanzees and orang-utans. They say the results of their experiments seem to suggest that, like humans, these types of apes are able to remember past events.



Baby chimpanzees

Chimpanzees, or chimps, are the apes that are most closely related to humans. They are found in Central Africa. Chimps are known to be intelligent. They are one of the few

animals that are able to use 'tools' to get food. For example, chimps are known to make use of rocks and leaves to get nuts and honey. They will also use sticks to collect ants, which they also eat.

Orang-utans are bigger than chimpanzees. They live in the rainforests of Malaysia and the Indonesian islands of Borneo and Sumatra. Orang-utans are also known to be intelligent. For instance, they will use sticks to gather and eat termites. These insects live in large nests, or colonies.



Orang-utans

Being able to remember events and personal experiences that happened in the past is known as episodic memory. In humans something often helps us to remember certain things. This is described as a 'trigger'. For example, seeing something or a certain smell can 'trigger' different memories. Episodic memory is important. This is because it helps us to plan for things that may happen in future. So, remembering how you travelled around a city a few years ago will help you to plan another visit to the same city at a later date.

For their experiments the scientists used captive chimps and orang-utans. Three years ago they placed a number of boxes in different rooms. Inside some of the boxes were useful tools. The chimps and orang-utans were given a reward when they found the boxes that contained these tools. After taking part in the

experiment a few times the apes were able to remember where the useful tools could be found.

After a period of three years the scientists repeated the experiment. Therefore the rooms and boxes containing useful tools were all in the same places. The chimpanzees and orang-utans were then allowed to enter the rooms. To the surprise of the scientists the apes seemed to remember what had happened three years ago. This was because they immediately went to the boxes that contained the useful tools.

The scientists say that their experiments demonstrate that chimpanzees and orang-utans can remember events that took place several years ago. What's more it shows that they can remember something even if they are not expecting it to happen again in future.

The experiments suggest that like humans some apes do have an episodic memory. It shows that these apes can remember 'what' and 'where' something happened. Yet the experiment does not prove that the apes can remember 'when' it took place. Humans are able to do this. However, sometimes we are not very good at it! Many people often find it hard to recall when a certain event happened, especially if it was a long time ago. ▣

ANTI-SHARK SUITS

Scientists in Australia have designed two new types of wetsuit. They claim that the wetsuits will help to reduce the number of shark attacks.

Shark attacks occur in places such as Australia and South Africa. There are many different types of shark. Most will not threaten humans. Yet some, such as the great white shark,

are known to occasionally attack swimmers and surfers. Shark attacks are infrequent and not usually fatal. In Australia, on average, a shark kills one person each year. However, some people believe that these attacks are becoming more common. It's possible that this is because more people are now swimming in the sea. Last year, for example, sharks killed five people around the coast of Western Australia.



New surfer and diver wetsuits (SAMS)

A company called Shark Attack **Mitigation** Systems (SAMS) is selling the new wetsuits. Each costs A\$429 (£258). One has been designed for divers and the other for surfers.

The diver's wetsuit is covered in patterns. These are different shades of white and blue. The scientists say that this pattern makes it difficult for a shark to see the diver. The colours act like a type of **camouflage**. The diver wearing the wetsuit therefore 'blends in' with the colour of the surrounding water. The scientists say that sharks are able to sense their prey in different ways. Movements in the water, for instance, may attract them. However, when a shark attacks it needs to use its eyes. The scientists claim that a shark is unlikely to attack anything that it is unable to see.

The surfer's wetsuit is different. It has wide black and white stripes. From under the sea sharks can see

surfers on the surface **silhouetted** against the light. This means the white and blue camouflage pattern would not work. Certain colours put off, or repel, some marine creatures. The scientists say that many animals, including sharks, are repelled by black and white stripes. To them it is a warning signal that a creature is poisonous, or not safe to eat.

Before making the wetsuits the scientists carried out a number of tests with dummies. The government of Western Australia helped to pay for these tests. The dummies were coloured in the white and blue and the black and white stripe patterns. Other dummies were coloured black, like a normal wetsuit. The tests showed that the sharks would attack the black dummies yet seemed to ignore the patterned ones. More tests will be done in South Africa and south Australia in the future.

The SMAS Company admits that it cannot say a shark will never attack a person using one of the new wetsuits. However, the company believes that if a shark comes near a diver or surfer wearing one, an attack will be less likely. They will also have more time to escape, or get away. ▣

Newsademic.com

Editor: Rebecca Watson

Acknowledgements:

News story photographs by gettyimages

For further details about Newsademic and subscription prices visit
www.newsademic.com

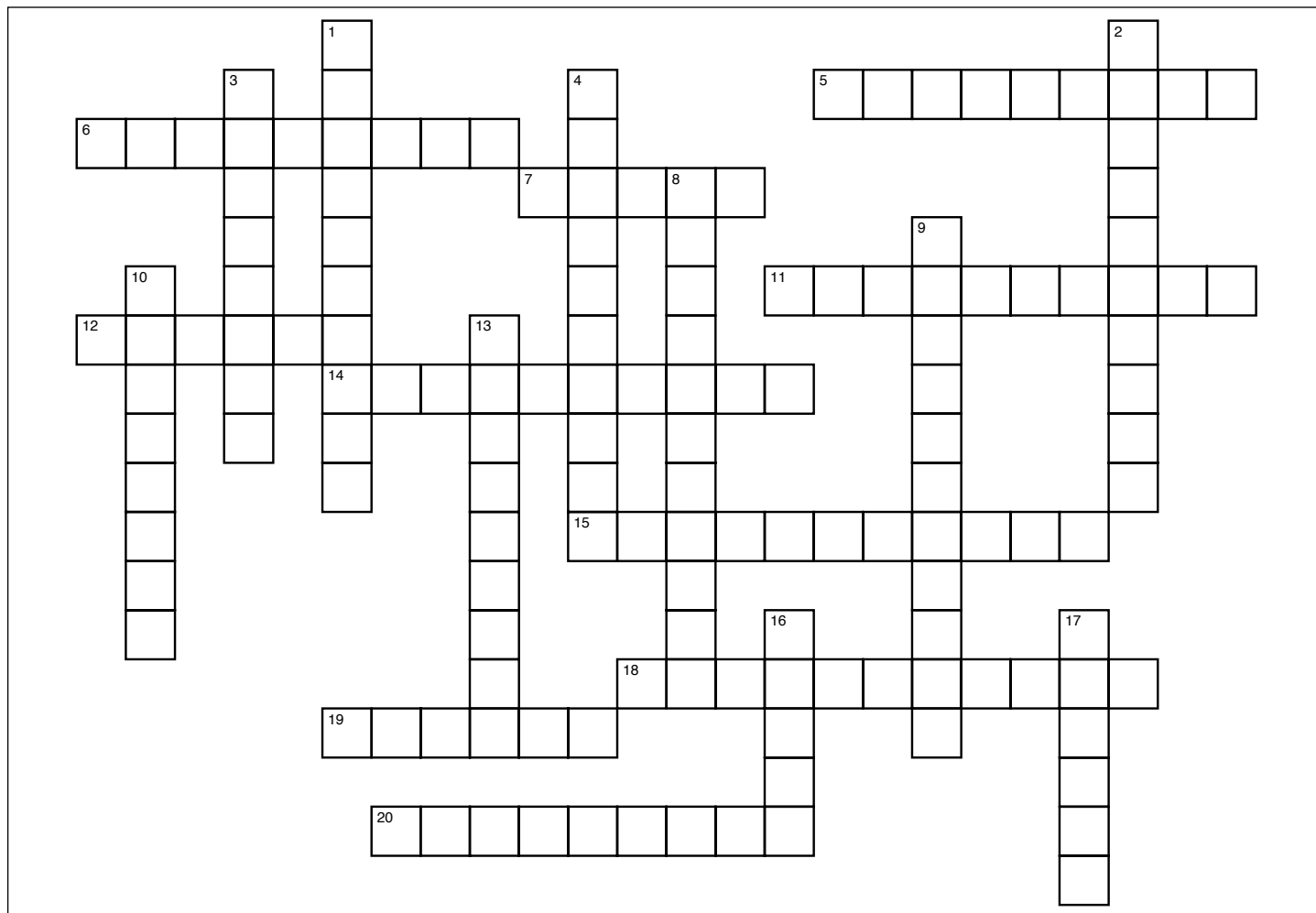
SCHOOL SUBSCRIBERS MAY
PHOTOCOPY ANY PART OF THIS
NEWSPAPER FOR USE WITHIN
THEIR SCHOOL ONLY.

© Newsademic 2013

ISSUE 202

GLOSSARY PUZZLE

INSTRUCTIONS: ① Complete the crossword. The answers are highlighted in orange in the news stories. There are 25 words highlighted and you need 20 of them to complete the crossword. ② Once you have solved the crossword go to the word search on the next page ➡



Across

- 5 Noun** An area of land that belongs to, or is connected with, a particular person or country
- 6 Noun** The business of making agreements and treaties among countries
- 7 Verb** To stay in one place in the air above the ground
- 11 Noun** A reduction in the harmful effects of something
- 12 Noun** Object that has a wide opening at the top, sloping sides, and a narrow tube at the bottom, used for pouring liquids into containers with narrow necks
- 14 Noun (Plural)** Criminal acts of capturing people and taking them away
- 15 Noun (Plural)** Areas in which groups of families or people live together
- 18 Noun** The act of making sure that rules or laws are obeyed
- 19 Noun** Safety and refuge given by a country to refugees from another country
- 20 Noun** A collection of legends, or traditional old stories, about people, gods and the history and culture of a country or civilisation

Down

- 1 Noun** Coloured patterns, on skin, fur or clothes, that make an animal, plant or person difficult to see because they blend into the surroundings
- 2 Noun (Plural)** Large metal boxlike objects, which can be loaded from one form of transport to another, that are used to carry cargo
- 3 Noun** A union of two or more groups that support each other
- 4 Noun (Plural)** The qualities of a substance or material, or the ways in which something can be used
- 8 Noun** A search to discover something
- 9 Verb** Appeared as a solid object, or shadow, against a lighter background
- 10 Noun** A short report made for immediate broadcast
- 13 Adjective** To do with a town or city
- 16 Noun** A group that tries to influence government policy
- 17 Noun (Plural)** Pieces of metal, usually in the shape of a narrow brick

Issue 202

GLOSSARY PUZZLE *CONTINUED*

S I L H O U E T T E D L L X D M S C
 R E C E V F P F X K S A C L D M B A
 E Q T I P W D B I N G S U M L L J M
 N B X T B R E A O L A Z Y E I T E O
 I F U M L V O I L C Y R W K F F M U
 A H F L Z E T P C E O X X J G V M F
 T R T C L C M L E T P Z Q A N O U L
 N M K M U E R E I R T W U M C J N A
 O F I D P D T R N N T Y R Q Q J I G
 C A B T N H R I E T G I D S I O C E
 B A V B I E O M N O S N E D F S I S
 H S B O T G E F L H O I T S L M P L
 L Y R W S C A O W D L E N N U F A I
 T L L Q R H H T Z I S W H S J N L B
 B U J O U T V L I Y C A M O L P I D
 S M F K Y L M A L O B B Y W V E A Z
 D N G M I L P R K I N G O T S E W M
 E X P L O R A T I O N N D B G D R Z

INSTRUCTIONS: ③ Find 19 of the 20 crossword answers in the word search. Words can go vertically, horizontally, diagonally and back to front. ④ After finding the 19 words write down the 20th (or missing) word under the puzzle.

Demics are tokens that Individual and Family Subscribers can earn. They are awarded for answering this Glossary Puzzle and/or the Daily News question – accessible by logged in users – correctly. Demics earned can be used by Family and Individual Subscribers in the Newsademic online store.

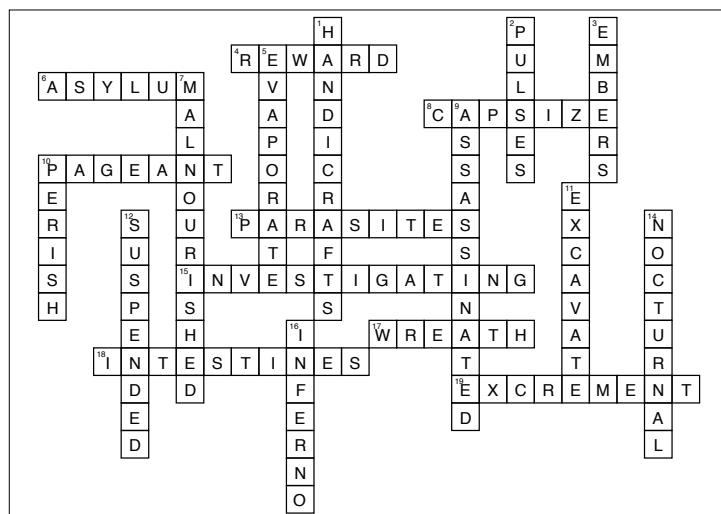


GET EXTRA DEMICS*

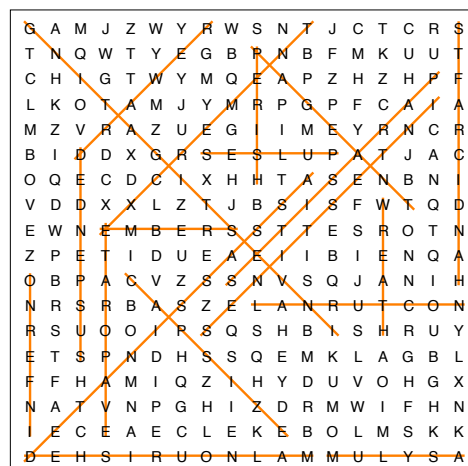
* Only applies to those who have purchased a Newsademic Individual or Family Subscription

If you wish to earn additional Demics log in to www.newsademic.com, go to the Prize Competitions area and submit the missing word. Puzzle entries must be submitted by 10 pm on 7th August 2013 (GMT/UTC).*

MISSING WORD ANSWER =



ISSUE 201 ANSWERS



E X C A V A T E